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October 3, 2019

Mr. Laurence Stinson  
Stinson Law Group, P.C.  
1421 Rumsey Avenue  
Cody, Wyoming 82414

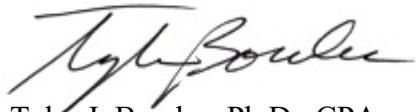
Re: Miears v. Sysco

Dear Mr. Stinson:

At your request, I have calculated the lost earning capacity suffered by Rodney Miears as a result of the incident on June 15, 2015 and his subsequent medical retirement as a highway patrolman on August 16, 2018. Table 1 provides a summary of my opinions. The tables, schedules, notes and footnotes that follow Table 1 provide the bases for my opinions and the information considered in my assessment of lost earning capacity. I also have attached a statement of qualifications, curriculum vitae, fee schedule, and four-year testimony history. The curriculum vitae includes a list of publications.

This report may need to be updated as additional information becomes available. If you have any questions, please call me.

Sincerely,



Tyler J. Bowles, Ph.D., CPA

**Table 1. Summary of Lost Earning Capacity  
Rodney Miears**

| <u>Description</u>  | <u>Amount</u>             | <u>Reference</u> |
|---|---------------------------|------------------|
| P.V. of Lost Wages and Retirement Benefits<br>Scenario A: No Promotions | <u><u>\$875,596</u></u>   | Table 2A         |
| P.V. of Lost Wages and Retirement Benefits<br>Scenario B: Promotions    | <u><u>\$1,179,883</u></u> | Table 2B         |

**Table 2A. Lost Wages and Retirement Benefits, Scenario A: No Promotions**  
**Rodney Miears**

| (1)   | (2)  | (3)                         | (4)                             | (5)                          | (6)   | (7)                        | (8)                                |  |
|---|--|-----------------------------|---------------------------------|------------------------------|---|----------------------------|------------------------------------|--|
| Year  | Cumulative<br>Beginning<br>Aug. 17th<br>(Note 1) | No. of<br>Years<br>(Note 2) | Age at<br>Aug. 17th<br>(Note 2) | But-For<br>Wages<br>(Note 3) | Actual and<br>Expected<br>Wages<br>(Note 4) | Lost<br>Wages<br>(4) - (5) | Retirement<br>Benefits<br>(Note 5) | Present<br>Value<br>of Lost<br>Wages and<br>Benefits<br>(Note 6) |
| 2018  | 1.00   | 31.50                       | \$70,000                        | \$52,012                     | \$17,988                                    | \$11,198                   | \$29,187                           |  |
| 2019  | 2.00   | 32.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2020  | 3.00   | 33.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2021  | 4.00   | 34.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2022  | 5.00   | 35.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2023  | 6.00   | 36.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2024  | 7.00   | 37.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2025  | 8.00   | 38.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2026  | 9.00   | 39.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2027  | 10.00  | 40.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2028  | 11.00  | 41.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2029  | 12.00  | 42.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2030  | 13.00  | 43.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2031  | 14.00  | 44.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2032  | 15.00  | 45.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2033  | 16.00  | 46.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2034  | 17.00  | 47.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2035  | 18.00  | 48.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2036  | 19.00  | 49.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2037  | 20.00  | 50.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2038  | 21.00  | 51.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2039  | 22.00  | 52.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2040  | 23.00  | 53.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2041  | 24.00  | 54.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2042  | 25.00  | 55.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2043  | 26.00  | 56.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2044  | 27.00  | 57.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2045  | 28.00  | 58.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2046  | 29.00  | 59.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| 2047  | 30.00  | 60.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 29,187                             |  |
| <b>Present Value of Total Lost Earning Capacity</b> |  |                             |                                 |                              |   |                            | <b>\$875,596</b>                   |  |

**Table 2B. Lost Wages and Retirement Benefits, Scenario B: Promotions**  
**Rodney Miears**

| Year  | Cumulative<br>Beginning<br>Aug. 17th<br>(Note 1) | No. of<br>Years<br>(Note 2) | Age at<br>Aug. 17th<br>(Note 2) | But-For<br>Wages<br>(Note 3) | Actual and<br>Expected<br>Wages<br>(Note 4) | Lost<br>Wages<br>(4) - (5) | Retirement<br>Benefits<br>(Note 5) | Present<br>Value<br>of Lost<br>Wages and<br>Benefits<br>(Note 6) |
|---|--|-----------------------------|---------------------------------|------------------------------|---|----------------------------|------------------------------------|--|
| 2018  | 1.00   | 31.50                       | \$70,000                        | \$52,012                     | \$17,988                                    | \$11,198                   | \$11,198                           | \$29,187   |
| 2019  | 2.00   | 32.50                       | 70,000                          | 52,012                       | 17,988                                      | 11,198                     | 11,198                             | 29,187   |
| 2020  | 3.00   | 33.50                       | 74,811                          | 52,012                       | 22,799                                      | 12,449                     | 12,449                             | 35,248   |
| 2021  | 4.00   | 34.50                       | 74,811                          | 52,012                       | 22,799                                      | 12,449                     | 12,449                             | 35,248   |
| 2022  | 5.00   | 35.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2023  | 6.00   | 36.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2024  | 7.00   | 37.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2025  | 8.00   | 38.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2026  | 9.00   | 39.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2027  | 10.00  | 40.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2028  | 11.00  | 41.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2029  | 12.00  | 42.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2030  | 13.00  | 43.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2031  | 14.00  | 44.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2032  | 15.00  | 45.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2033  | 16.00  | 46.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2034  | 17.00  | 47.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2035  | 18.00  | 48.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2036  | 19.00  | 49.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2037  | 20.00  | 50.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2038  | 21.00  | 51.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2039  | 22.00  | 52.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2040  | 23.00  | 53.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2041  | 24.00  | 54.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2042  | 25.00  | 55.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2043  | 26.00  | 56.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2044  | 27.00  | 57.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2045  | 28.00  | 58.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2046  | 29.00  | 59.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| 2047  | 30.00  | 60.50                       | 89,687                          | 63,914                       | 25,773                                      | 14,651                     | 14,651                             | 40,424   |
| <b>Present Value of Total Lost Earning Capacity</b> |  |                             |                                 |                              |   |                            |                                    | <b><u>\$1,179,883</u></b>  |

**Schedule 1. State of Wyoming Classification and Pay Structure**  
**Rodney Miears**

| (1)        | (2)                                     | (3)         | (4)     | (5)     |
|------------|---|-------------|---------|---------|
| Class Code | Class Title                             | Monthly Pay |         |         |
|            |   | Min         | MPP     | Max     |
| PSHP08     | Highway Patrol Trooper II               | \$4,013     | \$5,016 | \$6,019 |
| PSHP09     | Highway Patrol Trooper III              | 4,414       | 5,517   | 6,620   |
| PSHM11     | Highway Patrol Lieutenant               | 5,588       | 6,985   | 8,382   |
| PSPE07     | Port of Entry Compliance Review Auditor | 3,214       | 4,018   | 4,822   |

Notes:

1. Mr. Miears was medically retired from his job as a Highway Patrol Officer on August 16, 2018.<sup>1</sup> The next day, Mr. Miears was hired by the Wyoming Department of Transportation as a Port of Entry Compliance Review Auditor (POE Auditor).<sup>2</sup> Mr. Miears' new position has lower wages than his previous position as a patrol officer.<sup>3</sup> Therefore, my calculation of lost earnings begins on August 17, 2018.
2. At the date of the incident, June 15, 2015, Mr. Miears was 28.3 years old.<sup>4</sup> At the date of his job change, Mr. Miears was 31.5 years old. Mr. Miears completed a two-year program at Laramie County Community College, receiving a degree in Law Enforcement and Criminal Justice.<sup>5</sup> His worklife expectancy from the date of the incident is approximately 33 years, while his worklife expectancy from the date of job change is approximately 30 years.<sup>6</sup> Both worklife expectancies indicate that, if continuously employed, Mr. Miears would have worked until approximately August of 2048.<sup>7</sup>
3. At the time of his medical retirement, Mr. Miears was earning a base salary of \$61,608 as a patrol officer.<sup>8</sup> He earned additional amounts from on-call and shift differential pay.<sup>9</sup>

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<sup>1</sup>Plaintiff Rodney Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019, No. 17. Also, in the preparation of this report I interviewed Mr. Miears by telephone on October 2, 2019 (Interview).

<sup>2</sup>Id.

<sup>3</sup>Id. Also see pay stubs for the periods ending December 31, 2017, July 31, 2018, and September 30, 2019.

<sup>4</sup>Mr. Miears was born February 28, 1987. Plaintiff Rodney Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019, p. 2.

<sup>5</sup>Rodney Miears Deposition, August 28, 2019, pp. 26-27.

<sup>6</sup>Skoog, Gary R., James A. Ciecka, and Kurt V. Krueger, "The Markov Process Model of Labor Force Activity: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors" *Journal of Forensic Economics* 22(2, 2011):165-229, Table 8. See Appendix A.

<sup>7</sup>It is noted that a "worklife expectancy" measures the cumulative number of years a person is expected to be in the workforce, not the continuous number of years until retirement. As such, a worklife expectancy accounts for periods of the labor force. However, given I use a net discount rate of zero (see Note 5 below) accounting for Mr. Miears' worklife expectancy as whole, continuous years until retirement is appropriate.

<sup>8</sup>Mr. Miears' July 31, 2018 pay stub shows his base monthly salary at \$5,134. (\$5,134 x 12 = \$61,608). Also see also Mr. Miears' December 31, 2017 pay stub and Plaintiff Rodney Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019, No. 16.

<sup>9</sup>Id.

His reported wages from the five years prior to his job change all exceeded his base pay, as seen in the table below:<sup>10</sup>

| <u>Rodney Miears W-2 Wages</u> |             |             |             |
|--------------------------------|-------------|-------------|-------------|
| <u>2010</u>                    | <u>2011</u> | <u>2012</u> | <u>2013</u> |
| \$46,755                       | \$51,769    | \$53,352    | \$62,664    |
| <u>2014</u>                    | <u>2015</u> | <u>2016</u> | <u>2017</u> |
| \$64,455                       | \$69,231    | \$68,446    | \$71,701    |

Over the last three years of working as a patrol officer, his average annual wages were approximately \$70,000.<sup>11</sup> I have estimated future “but-for” wages under two scenarios, depending on two alternative assumptions regarding promotions as a patrol officer and a POA Auditor.

In Scenario A, I have assumed that Mr. Miears’ position as a Highway Patrol Trooper II would not change, and, thus, his salary would not increase due to promotions.<sup>12</sup> However, Mr. Miears’ reports that it is likely he would have been promoted to a Highway Patrol Lieutenant in the future.<sup>13</sup> This promotion would come with an increase in salary.<sup>14</sup> Based on this information, I have estimated “but-for” future wages under the assumption that Mr. Miears would have experienced promotions and salary increases – Scenario B. Under Scenario B, I have assumed that in 2020 Mr. Miears would have moved up the pay scale to a Highway Patrol Trooper III and in 2022 he would have been promoted to a Lieutenant.<sup>15</sup>

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<sup>10</sup>Rodney Miears W-2 statements, 2010-2018. Note that reported wages per W-2 statements are lower than gross wages as the former reflects employee contributions to health insurance. For, example, Mr. Miears’ W-2 wages and gross wages for 2017 are \$71,707 and \$74,082, respectively. See 2017 W-2 statement and pay stub for the period ending December 31, 2017.

<sup>11</sup>Also see pay stubs for the periods ending December 31, 2017, July 31, 2018, and September 30, 2019.

<sup>12</sup>Mr. Miears stated that his official position at the time of his job change was “Highway Patrol Trooper II” (Interview).

<sup>13</sup>Interview. Plaintiff Rodney Miears’ Answers to Defendant Sysco Montana, Inc.’s First Interrogatories, April 26, 2019, No. 17.

<sup>14</sup>Id. See also State of Wyoming Classification and Pay Structure, March 26, 2019.

<sup>15</sup>Pay scale information regarding these positions is provided in Schedule 1. I have assumed that Mr. Miears would have earned the MPP salary.

As Mr. Miears regularly earned more than his base salary (see discussion above), I have assumed that his total wages would continue to outpace his base pay. Mr. Miears' average annual wages from 2015 - 2017 were approximately \$70,000, which is approximately 13 percent higher than his base salary of \$61,608.<sup>16</sup> Thus, for the years in which I assume Mr. Miears would have been working as a Highway Patrol Trooper III, I have calculated but-for wages as 13 percent above the MPP rate: \$5,517/mo. x 12mos. x 1.13 = \$74,811.<sup>17</sup>

For the years in which I assume Mr. Miears would have been working as a Highway Patrol Lieutenant, I have calculated but-for wages as 7 percent above the MPP rate: \$6,985/mo. x 12mos. x 1.07 = \$89,687.<sup>18</sup>

4. In his new job as a POE Auditor, Mr. Miears' base pay is \$46,740 annually.<sup>19</sup> However, based on his December 31, 2018 and September 30, 2019 pay stubs, his total wages are approximately 7 percent higher than his base pay. Specifically, Mr. Miears' average wages from these two months was \$4,104, which is approximately 7 percent above his average base salary of \$3,848.

In addition to his new position, Mr. Miears has also worked as a middle school football coach and may work as a middle school wrestling coach.<sup>20</sup> Working as a football coach, Mr. Miears earned \$1,763 in 2018. Based on this fact, and the uncertainty regarding whether Mr. Miears will work as a wrestling coach, I have assumed that Mr. Miears expected future wages will include \$2,000 annually from coaching.<sup>21</sup>

Based on the above discussion, in Scenario A I have assumed that Mr. Miears' can expect to earn \$52,012 ((\$3,895/mo. x 12mos. x 1.07) + \$2,000).<sup>22</sup>

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<sup>16</sup>Mr. Miears' December 31, 2018 and July 31, 2018 pay stubs also suggest that Mr. Miears' total wages were approximately 13 percent higher than his base pay.

<sup>17</sup>See Schedule 1.

<sup>18</sup>See Schedule 1. I assume 7 percent in this instance as it is possible a Lieutenant does not earn as much shift differential or overtime pay. In the event information is provided showing Lieutenants total wages are greater than 7 percent of their base pay, I reserve the right to update my report.

<sup>19</sup>Plaintiff Rodney Miears' Answers to Defendant Sysco Montana, Inc.'s First Interrogatories, April 26, 2019, No. 17. Mr. Miears' December 31, 2018 pay stub shows his base monthly salary at \$3,800. Mr. Miears' September 30, 2019 pay stub shows his base monthly salary at \$3,895. (\$3,895 x 12 = \$46,740).

<sup>20</sup>Mr. Miears Deposition, pp. 155-164. See also Mr. Miears' 2018 W-2 statement from Park County School District.

<sup>21</sup>Interview.

<sup>22</sup>See Schedule 1.

In Scenario B, I assume that Mr. Miears will receive a pay increase in 2022. The pay increase will move Mr. Miears up the pay scale to earning the maximum base salary for a POE Auditor.<sup>23</sup> Thus, beginning in 2022, Mr. Miears wages are expected to be \$63,914: (\$4,822/mo. x 12mos. x 1.07) + \$2,000.<sup>24</sup>

5. Both as a Patrol Officer and a POE Auditor, Mr. Miears is a member of the Wyoming Retirement System (WRS) and receives employer contributions to his retirement account.<sup>25</sup> However, the WRS has special provisions for public safety officers which results in significantly higher employer contributions to employee retirement accounts.<sup>26</sup> The following shows the employer contribution to Mr. Miears' account during periods when he was a patrol officer and a POE Auditor:<sup>27</sup>

| <u>Period Ending</u> | <u>YTD Wages</u> | <u>Employer WRS Contribution</u> | <u>As a % of Wages</u> | <u>Position</u> |
|----------------------|------------------|----------------------------------|------------------------|-----------------|
| 12/31/17             | \$74,082         | \$19,725                         | 26.6                   | Patrol Officer  |
| 7/31/18              | \$38,285         | \$10,120                         | 26.4                   | Patrol Officer  |
| 9/30/19              | \$36,737         | \$5,159                          | 14.1                   | POE Auditor     |

Based on this information, I have assumed that Mr. Miears' has lost retirement benefits equal to the difference between 26 percent of his but-for wages and 14 percent of his POE Auditor wages.

6. Future losses are projected in uninflated dollars. Therefore, the present value of each loss has been calculated based on a net discount rate, which is approximately the difference between the interest rate on a secure investment (e.g., U.S. Treasury securities<sup>28</sup>) and the growth rate in wages. A net discount rate of zero percent has been used to discount lost

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<sup>23</sup>Plaintiff Rodney Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019, No. 17. Interview.

<sup>24</sup>See Schedule 1.

<sup>25</sup>Interview; W-2 statements; and pay stubs.

<sup>26</sup>See Wyoming Retirement System, Warden Patrol, and DCI Pension Plan Handbook and Wyoming Retirement System, Public Employee Pension Plan Handbook Tier I and II (retirement.state.wy.us).

<sup>27</sup>See pay stubs for the periods ending December 31, 2017, July 31, 2018, and September 30, 2019.

<sup>28</sup>In Jones & Laughlin Steel Corp. v. Pfeifer (462 U.S. 523), the U.S. Supreme Court provides the rationale for using the yield on Treasury securities for discounting future damages in personal injury cases.

earnings. This net discount rate is consistent with current interest rates and recent and expected wages growth rates.<sup>29</sup>

General Note. Following is a list of material considered in the preparation of this report.:

1. Plaintiff Rodney Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019.
2. Rodney Miears Deposition, August 28, 2019.
3. Marian Miears Deposition, August 28, 2019.
4. Skoog, Gary R., James A. Ciecka, and Kurt V. Krueger, "The Markov Process Model of Labor Force Activity: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors" *Journal of Forensic Economics* 22(2, 2011):165-229.
5. Rodney Miears W2s (2010-2018) and Tax Returns (2012-2018), BATES Miears 000465-530.
6. Rodney Miears Pay Stubs, December 31, 2017, July 31, 2018, December 31, 2018, and September 30, 2019.
7. Telephone Interview with Rodney Miears, October 2, 2019.
8. State of Wyoming Classification and Pay Structure, March 26, 2019.
9. Wyoming Retirement System, Warden Patrol, and DCI Pension Plan Handbook and Wyoming Retirement System, Public Employee Pension Plan Handbook Tier I and II ([retirement.state.wy.us](http://retirement.state.wy.us)).
10. Jones & Laughlin Steel Corp. v. Pfeifer (462 U.S. 523).
11. [www.treasury.gov](http://www.treasury.gov)
12. Complaint and Jury Demand, December 28, 2018.
13. BATES 000531-578.
14. Plaintiff Marian Miears' Answers to Defendant Sysco Mantana, Inc.'s First Interrogatories, April 26, 2019.
15. 2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds.
16. [data.bls.gov](http://data.bls.gov).

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<sup>29</sup>See Daily Treasury Yield Curve Rates ([www.treasury.gov](http://www.treasury.gov)); 2018 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplemental Medical Insurance Trust Funds; and [data.bls.gov](http://data.bls.gov). This material is provided in Appendix B.

## **Appendix A**

### **Worklife Expectancy Table**

*Journal of Forensic Economics* 22(2), 2011, pp.165-229  
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## **The Markov Process Model of Labor Force Activity: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors**

Gary R. Skoog, James E. Ciecka and Kurt V. Krueger\*

### **Abstract**

This paper updates the Skoog-Ciecka (2001) worklife tables, which used 1997-1998 data, and the Krueger (2005) worklife tables, which used 1998-2004 data. The present paper uses data generated by the methodology Krueger devised in his 2003 PhD dissertation. We have pooled the data beginning January 2005 and continuing through December 2009, a period of five years, using observations matched a year apart. Thus, we have roughly four times the data in the first of the previous studies, and about that of the second. We chose this period for a variety of reasons, including recency, business cycle and trend considerations. The result is the most current and disaggregated set of worklife tables, along with extended probability calculations and statistical measures available to forensic economists.

### **I. Introduction**

Worklife expectancy within the Markov model remains the current paradigm employed by forensic economists to calculate time in and out of the labor force resulting from mortality and transitions into and out of activity. Its use is commonly dated to Smith (1982) and the Bureau of Labor Statistics *Bulletin 2135*, which announced the change from the conventional model; but the model goes back much earlier. Two living states, active and inactive, are employed and continue to be used in the worklife tables that are in most common use.

This paper updates the Skoog-Ciecka (2001a and 2001b) worklife tables, which used 1997-1998 data, and the Krueger (2004) worklife tables, which used 1998-2004 data. The present paper estimates probability mass functions introduced by Skoog and Ciecka (2001a and 2002) with data generated by the methodology in Krueger (2003). We have pooled the data beginning January 2005 and continuing through December 2009, a period of five years, using observations matched one year apart. Thus, we have roughly four times the data

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Table 8  
Characteristics for Initially Active Men with Associate's Degree

| WLE | Mean  | Median | Mode  | SD   | SK    | KU   | 10%   | 25%   | 75%   | 90%   | WLE-B | SE-B |
|-----|-------|--------|-------|------|-------|------|-------|-------|-------|-------|-------|------|
| Age |       |        |       |      |       |      |       |       |       |       |       |      |
| 19  | 40.12 | 41.50  | 42.50 | 9.71 | -0.98 | 5.06 | 28.50 | 35.50 | 46.50 | 50.50 | 40.12 | 0.32 |
| 20  | 33.27 | 40.50  | 41.50 | 9.60 | -0.95 | 4.95 | 27.50 | 34.50 | 45.50 | 49.50 | 39.28 | 0.32 |
| 21  | 38.46 | 39.50  | 40.50 | 9.49 | -0.91 | 4.84 | 27.50 | 33.50 | 44.50 | 49.50 | 38.47 | 0.33 |
| 22  | 37.68 | 38.50  | 40.50 | 9.36 | -0.87 | 4.72 | 26.50 | 32.50 | 43.50 | 48.50 | 37.67 | 0.32 |
| 23  | 36.90 | 37.50  | 39.50 | 9.23 | -0.83 | 4.58 | 25.50 | 32.50 | 42.50 | 47.50 | 36.88 | 0.32 |
| 24  | 36.09 | 37.50  | 38.50 | 9.11 | -0.78 | 4.45 | 24.50 | 31.50 | 42.50 | 46.50 | 36.08 | 0.32 |
| 25  | 35.27 | 36.50  | 37.50 | 8.99 | -0.73 | 4.32 | 24.50 | 30.50 | 41.50 | 45.50 | 35.26 | 0.32 |
| 26  | 34.44 | 35.50  | 36.50 | 8.87 | -0.69 | 4.20 | 23.50 | 29.50 | 40.50 | 44.50 | 34.43 | 0.32 |
| 27  | 33.60 | 34.50  | 35.50 | 8.77 | -0.65 | 4.08 | 22.50 | 28.50 | 39.50 | 43.50 | 33.59 | 0.32 |
| 28  | 32.75 | 33.50  | 34.50 | 8.66 | -0.61 | 3.97 | 21.50 | 27.50 | 38.50 | 42.50 | 32.73 | 0.32 |
| 29  | 31.88 | 32.50  | 33.50 | 8.57 | -0.57 | 3.86 | 21.50 | 27.50 | 37.50 | 41.50 | 31.87 | 0.32 |
| 30  | 31.02 | 31.50  | 32.50 | 8.47 | -0.53 | 3.76 | 20.50 | 26.50 | 36.50 | 40.50 | 31.00 | 0.31 |
| 31  | 30.15 | 30.50  | 31.50 | 8.38 | -0.50 | 3.67 | 19.50 | 25.50 | 35.50 | 40.50 | 30.14 | 0.31 |
| 32  | 29.27 | 29.50  | 30.50 | 8.29 | -0.46 | 3.58 | 18.50 | 24.50 | 34.50 | 39.50 | 29.25 | 0.30 |
| 33  | 28.37 | 28.50  | 29.50 | 8.21 | -0.42 | 3.50 | 17.50 | 23.50 | 33.50 | 38.50 | 28.36 | 0.30 |
| 34  | 27.48 | 28.50  | 28.50 | 8.12 | -0.39 | 3.42 | 17.50 | 22.50 | 32.50 | 37.50 | 27.46 | 0.30 |
| 35  | 26.58 | 27.50  | 27.50 | 8.04 | -0.35 | 3.35 | 16.50 | 21.50 | 31.50 | 36.50 | 26.57 | 0.30 |
| 36  | 25.69 | 26.50  | 26.50 | 7.96 | -0.32 | 3.28 | 15.50 | 20.50 | 31.50 | 35.50 | 25.68 | 0.30 |
| 37  | 24.81 | 25.50  | 25.50 | 7.88 | -0.29 | 3.22 | 14.50 | 19.50 | 30.50 | 34.50 | 24.80 | 0.30 |
| 38  | 23.93 | 24.50  | 24.50 | 7.79 | -0.26 | 3.17 | 13.50 | 19.50 | 29.50 | 33.50 | 23.92 | 0.30 |
| 39  | 23.06 | 23.50  | 23.50 | 7.70 | -0.22 | 3.12 | 12.50 | 18.50 | 28.50 | 32.50 | 23.05 | 0.30 |
| 40  | 22.21 | 22.50  | 22.50 | 7.60 | -0.19 | 3.07 | 12.50 | 17.50 | 27.50 | 31.50 | 22.19 | 0.30 |
| 41  | 21.36 | 21.50  | 21.50 | 7.50 | -0.15 | 3.03 | 11.50 | 16.50 | 26.50 | 30.50 | 21.36 | 0.30 |
| 42  | 20.52 | 20.50  | 20.50 | 7.39 | -0.11 | 2.99 | 10.50 | 15.50 | 25.50 | 29.50 | 20.52 | 0.30 |
| 43  | 19.68 | 19.50  | 20.50 | 7.29 | -0.08 | 2.95 | 10.50 | 14.50 | 24.50 | 28.50 | 19.67 | 0.30 |
| 44  | 18.84 | 19.50  | 19.50 | 7.18 | -0.04 | 2.92 | 9.50  | 14.50 | 23.50 | 27.50 | 18.83 | 0.30 |
| 45  | 18.00 | 18.50  | 18.50 | 7.07 | 0.00  | 2.89 | 8.50  | 13.50 | 22.50 | 26.50 | 17.99 | 0.30 |
| 46  | 17.17 | 17.50  | 17.50 | 6.96 | 0.04  | 2.87 | 7.50  | 12.50 | 21.50 | 25.50 | 17.17 | 0.31 |
| 47  | 16.35 | 16.50  | 16.50 | 6.84 | 0.09  | 2.85 | 7.50  | 11.50 | 20.50 | 25.50 | 16.35 | 0.30 |
| 48  | 15.55 | 15.50  | 15.50 | 6.72 | 0.13  | 2.84 | 6.50  | 10.50 | 20.50 | 24.50 | 15.54 | 0.30 |
| 49  | 14.76 | 14.50  | 14.50 | 6.59 | 0.17  | 2.84 | 6.50  | 10.50 | 19.50 | 23.50 | 14.76 | 0.31 |
| 50  | 13.98 | 13.50  | 13.50 | 6.45 | 0.22  | 2.85 | 5.50  | 9.50  | 18.50 | 22.50 | 13.99 | 0.29 |
| 51  | 13.22 | 13.50  | 12.50 | 6.31 | 0.27  | 2.86 | 4.50  | 8.50  | 17.50 | 21.50 | 13.23 | 0.29 |
| 52  | 12.48 | 12.50  | 11.50 | 6.17 | 0.32  | 2.89 | 4.50  | 8.50  | 16.50 | 20.50 | 12.48 | 0.28 |
| 53  | 11.77 | 11.50  | 10.50 | 6.01 | 0.37  | 2.92 | 3.50  | 7.50  | 15.50 | 19.50 | 11.77 | 0.28 |
| 54  | 11.10 | 10.50  | 9.50  | 5.85 | 0.43  | 2.97 | 3.50  | 6.50  | 14.50 | 18.50 | 11.10 | 0.28 |
| 55  | 10.44 | 10.50  | 8.50  | 5.68 | 0.49  | 3.03 | 3.50  | 6.50  | 14.50 | 17.50 | 10.45 | 0.28 |
| 56  | 9.80  | 9.50   | 7.50  | 5.52 | 0.55  | 3.10 | 2.50  | 5.50  | 13.50 | 17.50 | 9.81  | 0.28 |
| 57  | 9.19  | 8.50   | 6.50  | 5.35 | 0.61  | 3.18 | 2.50  | 5.50  | 12.50 | 16.50 | 9.20  | 0.28 |
| 58  | 8.61  | 8.50   | 5.50  | 5.18 | 0.67  | 3.27 | 2.50  | 4.50  | 11.50 | 15.50 | 8.61  | 0.28 |
| 59  | 8.06  | 7.50   | 5.50  | 5.01 | 0.73  | 3.36 | 2.50  | 4.50  | 11.50 | 14.50 | 8.06  | 0.27 |
| 60  | 7.52  | 6.50   | 4.50  | 4.85 | 0.80  | 3.46 | 1.50  | 3.50  | 10.50 | 14.50 | 7.51  | 0.28 |
| 61  | 6.99  | 6.50   | 6.50  | 4.70 | 0.85  | 3.57 | 1.50  | 3.50  | 9.50  | 13.50 | 7.00  | 0.28 |
| 62  | 6.54  | 5.50   | 5.50  | 4.55 | 0.91  | 3.68 | 1.50  | 2.50  | 9.50  | 12.50 | 6.56  | 0.28 |
| 63  | 6.15  | 5.50   | 4.50  | 4.39 | 0.97  | 3.80 | 1.50  | 2.50  | 8.50  | 12.50 | 6.17  | 0.29 |
| 64  | 5.79  | 4.50   | 3.50  | 4.23 | 1.03  | 3.92 | 1.50  | 2.50  | 8.50  | 11.50 | 5.80  | 0.28 |
| 65  | 5.44  | 4.50   | 2.50  | 4.09 | 1.09  | 4.04 | 0.50  | 2.50  | 7.50  | 11.50 | 5.43  | 0.29 |
| 66  | 5.09  | 4.50   | 1.50  | 3.96 | 1.14  | 4.12 | 0.50  | 1.50  | 7.50  | 10.50 | 5.07  | 0.30 |
| 67  | 4.77  | 3.50   | 0.50  | 3.84 | 1.18  | 4.17 | 0.50  | 1.50  | 6.50  | 10.50 | 4.73  | 0.30 |
| 68  | 4.57  | 3.50   | 0.50  | 3.72 | 1.21  | 4.19 | 0.50  | 1.50  | 6.50  | 9.50  | 4.53  | 0.30 |
| 69  | 4.32  | 3.50   | 0.50  | 3.61 | 1.24  | 4.15 | 0.50  | 1.50  | 6.50  | 9.50  | 4.31  | 0.31 |
| 70  | 4.08  | 3.50   | 0.50  | 3.53 | 1.24  | 4.04 | 0.50  | 1.50  | 5.50  | 9.50  | 4.09  | 0.33 |
| 71  | 3.92  | 2.50   | 0.50  | 3.45 | 1.20  | 3.83 | 0.50  | 1.50  | 5.50  | 9.50  | 3.95  | 0.34 |
| 72  | 3.83  | 2.50   | 0.50  | 3.37 | 1.12  | 3.53 | 0.50  | 1.50  | 5.50  | 9.50  | 3.80  | 0.38 |
| 73  | 3.80  | 2.50   | 0.50  | 3.28 | 1.01  | 3.21 | 0.50  | 1.50  | 5.50  | 8.50  | 3.74  | 0.41 |
| 74  | 3.85  | 2.50   | 0.50  | 3.14 | 0.88  | 2.94 | 0.50  | 1.50  | 5.50  | 8.50  | 3.81  | 0.46 |
| 75  | 3.76  | 2.50   | 0.50  | 2.96 | 0.79  | 2.77 | 0.50  | 1.50  | 5.50  | 8.50  | 3.66  | 0.44 |

**Appendix B**

**U.S. Treasury Yields**

**Wage Growth Rates**

# U.S. DEPARTMENT OF THE TREASURY

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### Daily Treasury Yield Curve Rates

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#### Select Time Period

Current Month



| Date     | 1 Mo | 2 Mo | 3 Mo | 6 Mo | 1 Yr | 2 Yr | 3 Yr | 5 Yr | 7 Yr | 10 Yr | 20 Yr | 30 Yr |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 10/01/19 | 1.79 | 1.77 | 1.82 | 1.81 | 1.73 | 1.56 | 1.51 | 1.51 | 1.59 | 1.65  | 1.93  | 2.11  |
| 10/02/19 | 1.75 | 1.75 | 1.79 | 1.75 | 1.67 | 1.48 | 1.43 | 1.43 | 1.53 | 1.60  | 1.90  | 2.09  |

\* The 2-month constant maturity series begins on October 16, 2018, with the first auction of the 8-week Treasury bill.

30-year Treasury constant maturity series was discontinued on February 18, 2002 and reintroduced on February 9, 2002 to February 8, 2006, Treasury published alternatives to a 30-year rate. See [Long-Term Average Rate](#) for more information.

Treasury discontinued the 20-year constant maturity series at the end of calendar year 1986 and reinstated that series. As a result, there are no 20-year rates available for the time period January 1, 1987 through September 30, 1993.

**Treasury Yield Curve Rates:** These rates are commonly referred to as "Constant Maturity Treasury" rates, or CMTs. Yield is derived by the Treasury from the daily yield curve. This curve, which relates the yield on a security to its time to maturity is based on market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from indicative, bid-side market quotations (not actual transactions) obtained by the Federal Reserve Bank of New York at each trading day. The CMT yield values are read from the yield curve at fixed maturities, currently 1, 2, 3 and 6 months, 1, 2, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10 year maturity, for example, even if no outstanding security has 20 years remaining to maturity.

**Treasury Yield Curve Methodology:** The Treasury yield curve is estimated daily using a cubic spline model. Inputs to the model are primarily indicative bid-side yields for on-the-run Treasury securities. Treasury reserves the option to make changes to the model as appropriate and in its sole discretion. See our [Treasury Yield Curve Methodology](#) page for details.

**Negative Yields and Nominal Constant Maturity Treasury Series (CMTs):** At times, financial market conditions, such as extraordinary low levels of interest rates, may result in negative yields for some Treasury securities trading in the secondary market. Negative yields for Treasury securities most often reflect highly technical factors in Treasury markets related to the cash and repurchase markets, and are at times unrelated to the time value of money.

At such times, Treasury will restrict the use of negative input yields for securities used in deriving interest rates for the 1, 2, 5, 7, 10, 20, and 30-year Constant Maturity Treasury series (CMTs). Any CMT input points with negative yields will be reset to zero percent prior to CMT derivation. This decision is consistent with Treasury not accepting negative yields in Treasury nominal security auctions.

In addition, given that CMTs are used in many statutorily and regulatory determined loan and credit programs as well as in the secondary market, Treasury will not accept negative yields in these programs.

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## Employment Cost Index (NAICS)

**Series Id:** CIU3010000000000A (B)  
 Not seasonally adjusted  
**Series Title:** Total compensation for State and local government workers in All industries and occupations, 12-month  
**Ownership:** State and local government workers  
**Component:** Total compensation  
**Occupation:** All workers  
**Industry:** All workers  
**Subcategory:** All workers  
**Area:** United States (National)  
**Periodicity:** 12-month percent change

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| Year | Period | Estimate Value | Standard Error |
|------|--------|----------------|----------------|
| 2009 | Qtr4   | 2.3            | 0.2            |
| 2010 | Qtr4   | 1.8            | 0.1            |
| 2011 | Qtr4   | 1.3            | 0.1            |
| 2012 | Qtr4   | 1.9            | 0.2            |
| 2013 | Qtr4   | 1.9            | 0.2            |
| 2014 | Qtr4   | 2.0            | 0.2            |
| 2015 | Qtr4   | 2.5            | 0.2            |
| 2016 | Qtr4   | 2.4            | 0.1            |
| 2017 | Qtr4   | 2.5            | 0.1            |
| 2018 | Qtr4   | 2.6            | 0.1            |

B : Includes wages, salaries, and employer costs for employee benefits.

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**2018 ANNUAL REPORT OF  
THE BOARDS OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE AND  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE  
TRUST FUNDS**

**COMMUNICATION**

**From**

**THE BOARDS OF TRUSTEES,  
FEDERAL HOSPITAL INSURANCE AND  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE  
TRUST FUNDS**

**Transmitting**

**THE 2018 ANNUAL REPORT OF  
THE BOARDS OF TRUSTEES OF THE  
FEDERAL HOSPITAL INSURANCE AND  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE  
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### *HI Financial Status*

approximately equal to the change in the corresponding cost rate, but in the opposite direction. For example, a lower projected cost rate would result in an improvement or increase in the corresponding projected actuarial balance.

#### *a. Real-Wage Differential*

Table III.B11 shows projected HI income rates, cost rates, and actuarial balances on the basis of the intermediate assumptions, with various assumptions about the real-wage differential (the difference between the percent increase in the average wage in covered employment and the CPI). The ultimate real-wage differential will be 0.6 percentage point (high-cost alternative), 1.2 percentage points (intermediate projections), and 1.8 percentage points (low-cost alternative). In each case, the assumed ultimate annual increase in the Consumer Price Index (CPI) is 2.6 percent (as assumed for the intermediate projections), yielding ultimate percentage increases in nominal average annual wages in covered employment of 3.2, 3.8, and 4.4 percent under the three illustrations, respectively.

Past increases in real earnings have exhibited substantial variation. During 1951-1970, real earnings grew by an average of 2.2 percent per year. During 1972-1996, however, the average annual increase in real earnings amounted to only 0.53 percent.<sup>39</sup> Poor performance in real-wage growth would have substantial consequences for the HI trust fund; as shown in table III.B11, projected HI cost rates are fairly sensitive to the assumed growth rates in real wages. For the 75-year period 2018-2092, the summarized cost rate decreases from 5.15 percent (for a real-wage differential of 0.6 percentage point) to 4.38 percent (for a differential of 1.8 percentage points). The HI actuarial balance over this period shows a corresponding improvement for faster rates of growth in real wages.

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<sup>39</sup>The Trustees chose this period because it begins and ends with years in which the economy reached full employment. The period thus allows measurement of trend growth over complete economic cycles.

### Actuarial Analysis

**Table III.B11—Estimated HI Income Rates, Cost Rates, and Actuarial Balances, Based on Intermediate Estimates with Various Real-Wage Assumptions**  
 [As a percentage of taxable payroll]

| Valuation period        | Ultimate percentage increase in wages-CPI <sup>1</sup> |         |         |
|-------------------------|--|---------|---------|
|                         | 3.2-2.6  | 3.8-2.6 | 4.4-2.6 |
| Summarized income rate: |  |         |         |
| 25-year: 2018-2042      | 3.72   | 3.70    | 3.69    |
| 50-year: 2018-2067      | 3.80   | 3.83    | 3.88    |
| 75-year: 2018-2092      | 3.88   | 3.95    | 4.04    |
| Summarized cost rate:   |  |         |         |
| 25-year: 2018-2042      | 4.55   | 4.41    | 4.27    |
| 50-year: 2018-2067      | 4.91   | 4.65    | 4.38    |
| 75-year: 2018-2092      | 5.15   | 4.77    | 4.38    |
| Actuarial balance:      |  |         |         |
| 25-year: 2018-2042      | -0.84  | -0.71   | -0.57   |
| 50-year: 2018-2067      | -1.11  | -0.82   | -0.49   |
| 75-year: 2018-2092      | -1.27  | -0.82   | -0.34   |

<sup>1</sup>The first value in each pair is the assumed ultimate annual percentage increase in average wages in covered employment. The second value is the assumed ultimate annual percentage increase in the CPI. The difference between the two values is the real-wage differential.

The sensitivity of the HI actuarial balance to different real-wage assumptions is significant, but not as substantial as one might intuitively expect. Higher real-wage differentials immediately increase both HI expenditures for health care and wages for all workers. Though there is a full effect on wages and payroll taxes, the effect on benefits is only partial, since not all health care costs are wage-related. The HI cost rate decreases with increasing real-wage differentials because the higher real-wage levels increase the taxable payroll to a greater extent than they increase HI benefits. In particular, each 0.5-percentage-point increase in the assumed real-wage differential increases the long-range HI actuarial balance, on average, by about 0.39 percent of taxable payroll.

#### **b. Consumer Price Index**

Table III.B12 shows projected HI income rates, cost rates, and actuarial balances on the basis of the intermediate alternative, with various assumptions about the rate of increase for the CPI. The ultimate annual increase in the CPI will be 3.2 percent (low-cost alternative), 2.6 percent (intermediate projections), and 2.0 percent (high-cost alternative).<sup>40</sup> In each case, the assumed ultimate real-wage differential is 1.2 percent (as assumed for the intermediate projections), which yields ultimate percentage increases in average annual wages in covered employment of 4.4, 3.8, and 3.2 percent under the three illustrations.

<sup>40</sup>Prior to the 2015 report, the Trustees used the lower CPI for the low-cost alternative and the higher CPI for the high-cost alternative.

### *Actuarial Methodology*

and used the factors model to create the specific, year-by-year declining growth rates during the last 50 years of the projection. Beginning with the 2013 report, the Trustees used the statutory price updates and the volume and intensity assumptions from the factors model to derive the year-by-year Medicare cost growth assumptions for the last 50 years of the projection period. The remainder of section IV.D discusses the factors model and its role in the Medicare projections. Section V.C explains the methods used to derive the long-range cost growth assumptions underlying the illustrative alternative projection.

The key assumptions and factors model output used in this year's report are similar to those first used in the 2015 report. In subsequent reports, the Trustees will determine if additional historical data warrant a re-evaluation of these assumptions and a re-estimation of the factors model output.

#### **1. Long-Range Growth Assumptions for the Overall Health Sector**

The first step to estimate the long-range Medicare trends is to determine the long-range assumptions affecting the overall health sector. The Trustees use the factors model to determine the year-by-year growth rates for the overall health sector over the last 50 years of the projection. Based on the factors model, the Trustees assume that the long-range per capita overall health spending growth is GDP plus 0.8 percent (or 4.7 percent) for 2042, gradually declining to GDP plus 0.5 percent by 2092 (or 4.3 percent). The per capita increase in overall health care costs is due to the combined effects of general inflation, medical-specific excess price inflation (above general price growth), and changes in the utilization of services per person and the intensity or average complexity per service. The Trustees assume that beginning in 2042 (i) general price inflation will remain constant at 2.2 percent per year, as measured by the GDP deflator; (ii) excess medical price inflation will remain constant at 0.8 percent per year, as discussed in more detail below; and (iii) the annual increase in the volume and intensity of services per person will decline gradually from approximately 1.7 percent in 2042 to 1.3 percent in 2092 based on the key economic assumptions and elasticity estimates from the factors model, as described below.

Excess medical price inflation for the overall health sector is assumed to grow at 0.8 percent annually from 2042 through 2092. This assumption is roughly equivalent to the difference between the growth in the personal health care deflator over the past quarter century and

### *Long-Range Assumptions*

the growth in the GDP deflator over this same period.<sup>74</sup> Combining this assumption with the ultimate assumed growth of 2.2 percent per year in the GDP deflator yields the Trustees' estimate of the long-range rate of medical price growth of 3.0 percent annually. Using the relationship between medical price growth and resource-based health sector productivity growth<sup>75</sup> allows for the determination of medical input price growth.<sup>76</sup> For resource-based health sector productivity, the Trustees assume that the rate of growth will be equivalent to published research<sup>77</sup> of 0.4 percent per year. Hence, the Trustees' estimate of the long-range rate of growth of medical input prices is 3.4 percent.

As stated earlier, the factors model is based on economic research that separates health spending growth into its major drivers—income growth, relative medical price inflation, insurance coverage, and a residual that primarily reflects the impact of technological development. The factors model provides the ability to model the expected behavioral effects associated with a continuing increase in the share of national income devoted to consumption of health care services. In particular, this approach is based on historically estimated income and price elasticities and uses measurable key variables, providing a foundation for developing the long-range growth assumptions.<sup>78</sup>

In the factors model, the sensitivity of health cost growth to each of the three factors must be estimated. Each sensitivity is measured as an elasticity, which is the percentage change in cost growth that is caused

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<sup>74</sup>Information on the personal health care deflator is available at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>.

<sup>75</sup>Resource-based productivity is defined as the real value of provider goods and services divided by the real value of the resources (inputs) used to produce the goods and services, whereas price changes are measured across constant products—that is, defined health services with a constant mix of inputs. Resource-based productivity is used for this decomposition, rather than outcomes-based productivity (which incorporates the estimated value of improvements in health resulting from the services) because Medicare and most other payers reimburse providers based on their resource use.

<sup>76</sup>A third factor, provider profit margins, is assumed to remain constant over the long range.

<sup>77</sup>Information on updated estimates of hospital productivity is available at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/ProductivityMemo2016.pdf>; Fisher, Charles. "Multifactor Productivity in Physicians' Offices: An Exploratory Analysis." *Health Care Financing Review*, 29, no. 2 (2007): 15-32.

<sup>78</sup>Additional information on the "factors contributing to growth" model is available in a memorandum by the Office of the Actuary titled "The Long-Term Projection Assumptions for Medicare and Aggregate National Health Expenditures," available at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/ProjectionMethodology2018.pdf>.

## QUALIFICATIONS

Tyler J. Bowles is a Professor in the Department of Economics and Finance at Utah State University. From 2008 through 2015, he served as the head of that department. Dr. Bowles earned a B.S. degree in Economics with a minor in Accounting from Utah State University in 1984, a M.S. degree with a major in Economics from Utah State University in 1986, and a Ph.D. in Economics with a specialization in Econometrics from the University of North Carolina at Chapel Hill in 1991. He also is a licensed Certified Public Accountant. Further, in 2015 Dr. Bowles earned the Graduate Certificate in Rehabilitation Counseling from Utah State University (see attached).

Dr. Bowles began his professional career in 1989 teaching at a junior college and working for a regional certified public accounting firm. He has held a faculty position at Utah State University since 1994. He is an active researcher and has authored several articles that have been published in the forensic economics journals. His primary teaching responsibility has been in the area of American economic institutions, including the role of the rule of law. Dr. Bowles has been providing forensic economic consulting services since 1992 and has testified in courts in Utah, Idaho, Wyoming, and California.

## TYLER J. BOWLES

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Utah State University  
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### Education

2015 Graduate Certificate – Rehabilitation Counseling, Utah State University, Logan, Utah  
1991 Ph.D. – Economics, University of North Carolina-Chapel Hill  
Areas of Concentration: Econometrics and International Economics  
Dissertation Title: The Impacts of Monetary Factors on Commodity Prices and Stocks  
1986 M.S. – Economics, Utah State University, Logan, Utah  
Thesis Title: Trade Liberalization: The Impact on Utah's Dairy and Meat Industries  
1984 B.S. – Economics, Utah State University, Logan, Utah  
1980 Dairy Herdsmen Certificate, Utah State University, Logan, Utah

### Licenses/Certifications

Graduate Certificate – Rehabilitation Counseling  
Certified Public Accountant

### Honors and Awards

USU, College of Business, Faculty Advisor of the Year (2004/2005)  
USU College of Agriculture, Teacher of the Year (2001/2002)  
USU Department of Economics, Teacher of the Year (2001/2002)  
USU College of Business, Advisor of the Year (2000/2001)  
USU Presidential Leadership Council, Professor of the Year (1999/2000)  
USU College of Agriculture, Advisor of the Year (1999/2000)  
USU College of Business, Advisor of the Year (1998/1999)  
USU Department of Economics, Teacher of the Year (1996/97)  
USU Mortar Board Professor Award (1996/97)  
USU College of Agriculture, Teacher of the Year (1996/97)  
USU College of Agriculture, Faculty of the Quarter (Winter 1996)  
Graduated cum laude, Phi Kappa Phi, National Dean's List. Received an Elijah Watt Sells Award for scores on CPA Exam (scored in the top 0.20 percent out of 66,900 candidates).

### Professional Experience

2007-Present Professor, Department of Economics and Finance, Utah State University.

2008-2015 Head, Department of Economics and Finance, Utah State University.

1994-Present Private consulting, litigation support.

2002-2007 Associate Professor, Economics Department, Utah State University.

1994-2006 Owner/operator of irrigated farm and cattle operation in Southeast Idaho.

2000-2002 Assistant Professor, Economics Department, Utah State University.

|           |  |
|-----------|--|
| 1999-2000 | Senior Lecturer, Economic Department, Utah State University.   |
| 1994-1998 | Lecturer, Economics Department, Utah State University—teach introductory macroeconomics, international economics, and upper division courses agricultural economics.   |
| 1992-1994 | Adjunct Professor of Economics and Finance, University of Wyoming—intermediate microeconomics and financial markets and institutions.  |
| 1991-1994 | Economist and Accountant, Porter, Muirhead, Cornia, Howard, CPAs—corporate, individual, partnership, estate and trust tax compliance; audits of government entities; compilation and review of small business financial statements; estimation of damages in personal injury, wrongful death, wrongful discharge, discrimination, and lost profit cases. |
| 1989-1994 | Economics Instructor, Casper College and University of Wyoming-Casper College—principles of macroeconomics, principles of microeconomics, money and banking, and introductory accounting; advised students and participated in various faculty committees.   |
| 1986-1989 | Research Assistant, University of North Carolina at Chapel Hill.   |
| 1985-1986 | Research Assistant, Utah State University.   |

### **Memberships**

American Institute of Certified Public Accountants  
 American Academy of Economic and Financial Experts  
 National Association of Forensic Economists, Past Board Member

### **Publications in Refereed Journals**

Bowles, Tyler J. "Update to Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Utah." *Journal of Forensic Economics* 26(2, December 2016):229-234.

Bowles, Tyler J. "Update to Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Idaho." *Journal of Forensic Economics* 26(2, December 2016):223-228.

Robertson, Daniel, and Tyler J. Bowles. "The Economics of Geographical Ward Boundaries in the LDS Church," *The Journal of the Utah Academy of Sciences, Arts, and Letters*, 87 (2010) (Published 2011).

Zhou, L., B. Biswas, T. Bowles, and P. Saunders. "Impact of Globalization on Income Distribution Inequality in 60 Countries," *Global Economy Journal*, 11(1, March 2011): 1-32.

Bowles, Tyler J., and Ryan Bosworth. "An Empirical Basis for Allocating Enterprise and Personal Goodwill." *Business Valuation Review* 29(1, Spring 2010): 4-11.

Drollette, Sarah and Tyler J. Bowles. "The Effect of Math Tutoring on Academic Success in University-level mathematics and Statistics Courses." *The Journal of the Utah Academy of Sciences, Arts, and Letters* 85 (2009): 145-57.

Bowles, Tyler J. "Employment Discrimination: Distinguishing Between Equitable Remedies and Compensatory Damages." *Journal of Legal Economics* 15(1, August 2008): 11-20.

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Bowles, Tyler J., Adam McCoy, and Scott Bates. "The Effect of Supplemental Instruction on Timely Graduation." *College Student Journal* 42(3, September 2008): 853-59.

Bowles, Tyler J. "Damages Under Wrongful Death Statutes: The Relevancy of a Claimant's Nation of Residency." *Journal of Legal Economics* 13(3, September 2006):65-74.

Bowles, Tyler J. and W. Cris Lewis. "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Utah." *Journal of Forensic Economics* 18(2 and 3, Fall 2005):227-242. (Published July 2006).

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Bowles, Tyler J., W. Cris Lewis and Gary R. Wells. "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Idaho." *Journal of Forensic Economics* 17(3, Fall 2004):415-27. (Published December 2005)

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Lewis, W. Cris, Frank Caliendo, and Tyler J. Bowles. "Measuring Public Safety Retirement Plan Wealth: Implications for Assessing Economic Loss." *Journal of Legal Economics* 11(2, Fall 2001):61-80. (Published June 2003)

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Bowles, Tyler J., and Ryan Bosworth. "Scale Economies in Public Education: Evidence from School Level Data." *Journal of Education Finance* 28(2, Fall 2002):285-99.

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Lewis, W. Cris, and Tyler J. Bowles. "The Effect of Income Taxes on Optimal Portfolio Selection." *Journal of Wealth Management* 4(2, Fall 2001):29-36.

Bowles, Tyler J., and W. Cris Lewis. "A Time-Series Analysis of the Medical Care Price Index: Implications for Appraising Economic Losses." *Journal of Forensic Economics* 13(3, Fall 2000):245-54.

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Lewis, W. Cris, Tyler J. Bowles, and Frank Caliendo. "Savings and Investment Options: Lifetime Consumption and Financial Planning." *Journal of Wealth Management* 4(1, Summer 2001):44-54.

Caliendo, Frank, W. Cris Lewis, and Tyler J. Bowles. "New Findings on Strategic IRA Investing." *Journal of Wealth Management* 3(4, Spring 2001):49-53

Bowles, Tyler J., and W. Cris Lewis. "Tax Considerations in Valuing Non-Taxable Entities." *Business Valuation Review* 19(4, December 2000):175-85.

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Bowles, Tyler J., and W. Cris Lewis. "Prejudgment Interest: Issues and Case Studies." *Litigation Economics Digest* 4(2, Fall 1999):109-18.

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Bowles, Tyler J. "Wrongful Discharge: The Time Horizon of Future Damages and the Economic Basis for Damages." *Journal of Legal Economics* 4(1, Spring 1994):75-81.

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Lewis, W. Cris, and Tyler J. Bowles. "A Statistical Analysis of Federal Income Tax Rate Stability Over Time and Implications for Valuing Lifetime Earnings." *Journal of Forensic Economics* 12(3, Fall 1999):201-13 (published May 2000). (Article has been reprinted in *Economic Foundations of Injury and Death Damages*, edited by Roger T. Kaufman (Department of Economics, Smith College), James D. Rodgers (Pennsylvania State University), and Gerald D. Martin (California State University, Fresno, and Mack/Barclay, Inc.), Cheltenham, United Kingdom: Edward Elgar Publishing Ltd, 2005).

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### **Other Publications**

Bowles, Tyler J. "Corn Prices Rise on the Heels of Government Ethanol Mandates." *Progressive Dairyman* 22(4, March 2008):15.

Lewis, Cris W. "Ethanol Production Increases Risk for Dairy Producers." *Progressive Dairyman* 22(1, January 2008):10-11.

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Godfrey, E. Bruce, and Tyler Bowles. "Rollercoaster Income and Taxes: Some Options to Consider." *The Progressive Dairyman* (February 2002).

Bowles, Tyler J., and D. Scott Jackson. "All in the Family." *Western Farmer-Stockman* (April 2001).

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Bowles, Tyler J., and D. Scott Jackson. "Don't Be a Target." *Western Farmer-Stockman* (March 2001).

Bowles, Tyler J. Book Review: Expert Economic Testimony: Reference Guides for Judges and Attorneys. *Journal of Legal Economics* 9(1, Spring/Summer 1999):81-5 (published September 2000).

Bowles, Tyler J., and E. Bruce Godfrey. "Taxing Livestock Sales." *Western Farmer-Stockman* 120(10, August 2000):17.

Bowles, Tyler J., and E. Bruce Godfrey. "Selling the Farm: Be Careful with the Principal Residence Exclusion." *Western Farmer Stockman* (July 2000):34.

Bowles, Tyler J., and E. Bruce Godfrey. "Self-Employment Taxes: Recent Court Cases and Rulings." *Western Farmer-Stockman* 110(8, June 2000):15.

Bowles, Tyler J., and E. Bruce Godfrey. "Tax Tip: Consider Income Averaging to Cut Taxes." *Western Farmer-Stockman* 120(7, April 2000):16.

Lewis, W. Cris, and Tyler J. Bowles. *The Effect of Income Taxes on Optimal Portfolio Selection*. ERI Study Paper 99-08, Department of Economics, Utah State University, Logan, Utah, December 1997.

Bowles, Tyler J. "How to Make a Million." *Utah Farmer-Stockman* (December 1997).

**Presentations**

Bowles, Tyler J. "The Income Inequality Debate." Presented at the Northern Utah Estate Planning Group, Logan, Utah, December 8, 2015.

Bowles, Tyler J. "The Income Inequality Debate." Presented at the Utah State University Income Tax School, St. George, Utah, December 4, 2015.

Bowles, Tyler J. "Economic Insights." Presented at the Northern Utah Estate Planning Group, Logan, Utah, December 8, 2014.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, December 5, 2014.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, Salt Lake City, Utah, November 21, 2014.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, December 6, 2013.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, Salt Lake City, Utah, November 22, 2013.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, November 30, 2012.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, Salt Lake City, Utah, November 16, 2012.

Bowles, Tyler J and T. Boone Bowles "Current Risk Profile in U.S. Agriculture." Presented at the Annual Meetings of the Utah Chapter of the American Society of Farm Managers and Rural Appraisers, Logan, Utah, January 27, 2012.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, December 2, 2011.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, Salt Lake City, Utah, November 18, 2011.

Bowles, Tyler J and T. Boone Bowles "The U.S. Macroeconomy: The Good, Bad, and Ugly." Presented at the Annual Retreat for High Volume Franchisees of Harris Research (Chem-Dry), Garden City, Utah, September 23, 2011.

Bowles, Austin J., and Tyler J. Bowles. "The Temple Recommend: A Solution to the Free-Rider Problem." Presented at the 2011 Annual Conference of the Utah Academy of Arts, Sciences and Letters, April 8, 2011, SLC, Utah.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, December 3, 2010.

Bowles, Tyler J. "The Effects of Economic Stagnation in the Context of an Activist Government and a Multiracial Society." Presented at the Annual Tanner Symposium, Utah State University, Logan, Utah, March 26, 2010.

Robertson, Daniel and Tyler J. Bowles. "The Economics of Geographical Ward Boundaries in the LDS Church." Presented at the 2010 Annual Conference of the Utah Academy of Arts, Sciences and Letters, April 29, 2010, St. George, Utah.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, St. George, Utah, December 4, 2009.

Bowles, Tyler J. "Economic Update." Presented at the Utah State University Income Tax School, SLC, Utah, November 20, 2009.

Bowles, Tyler J., and Ryan Bosworth. "An Empirical Basis for Allocating Enterprise and Personal Goodwill." Presented at the Annual Meetings of the American Academy of Economic and Financial Experts, Las Vegas, Nevada, March 18, 2009.

Bowles, Tyler J. "Financial Crisis: What Went Wrong?" Utah State University, Jon M. Huntsman School of Business, Partners in Business, 39<sup>th</sup> Annual Finance Seminar, Logan, Utah January 22, 2009.

Bowles, Tyler J. "The Financial Crisis." Presented at the Utah State University Income Tax School, SLC, Utah, November 21, 2008.

Bowles, Tyler J. "Damages in Employment Discrimination Cases." Presented at the Annual Meetings of the Western Economic Association International, Honolulu, HI, July 1, 2008.

Bowles, Tyler J. "Personal Injury and Wrongful Death Damages: Current Issues and New Developments." American Institute of Certified Public Accountants, National Conference on Fraud and Litigation Services, Las Vegas, NV, September 27-29, 2006.

Bowles, Tyler J. "The Use of Hindsight in Commercial Damages Analysis." Presented at the Annual Meetings of the Western Economic Association International, San Diego, CA, June 30, 2006.

Zhou, Lei, Basudeb Biswas, and Tyler J. Bowles. "Globalization and Income Distribution Inequality within Countries." Presented at the Annual Meetings of the Western Economic Association International, San Diego, CA, July 2, 2006.

Bowles, Tyler J., and D. Scott Bosworth. "Online Enrollment in Economics Courses: A Treatment Model." Presented at the Seventh Annual Economics and the Class Room Conference, Jackson Lake Lodge, Grand Teton National Park, September 16, 2005.

Bowles, Tyler J. "Illegal Aliens: Claims for Lost Wages." Presented at the Annual Meetings of the Western Economic Association International, San Francisco, CA, July 7-8, 2005.

Bowles, Tyler J. "The Twin Deficits." Presented at the Utah State University Extension Income Tax School, St George, Utah, December 2, 2004

Bowles, Tyler J. "The Twin Deficits." Presented at the Utah State University Extension Income Tax School, Salt Lake City, Utah, November 18, 2004

Bowles, Tyler J., and W. Cris Lewis. "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Wyoming." Presented at the Annual Meetings of the Western Economic Association International, Vancouver, BC, July 1-2, 2004.

Bowles, Tyler J., and W. Cris Lewis. "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Utah." Presented at the Annual Meetings of the Western Economic Association International, Vancouver, BC, July 1-2, 2004.

Bowles, Tyler J., W. Cris Lewis, and Gary Wells. "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Idaho." Presented at the Annual Meetings of the Western Economic Association International, Vancouver, BC, July 1-2, 2004.

Bowles, Tyler J. "Economic Conditions." Presented at the Utah State University Extension Income Tax School, St George, Utah, December 4th, 2003.

Bowles, Tyler J. "Agricultural Tax Issues." Presented at the Utah State University Extension Income Tax School, Salt Lake City, Utah, November 21, 2003.

Bowles, Tyler J., and W. Cris Lewis. "A Comparison of Time Series Forecasting Models." Presented at the Annual Meetings of the Western Economic Association International, Denver, Colorado, July 12, 2003.

Lewis, W. Cris, and Tyler J. Bowles. "The Age-Earnings Profile: Cross-Section and Time-Series Analysis." Paper presented at the Annual Meetings of the Western Economic Association International, Denver, Colorado, July 12, 2003.

Bowles, Tyler J. "Professional Ethics and Social Welfare." Presented at the Utah State University Extension Income Tax School, Salt Lake City, Utah, November 21, 2002.

Bowles, Tyler J., and W. Cris Lewis. "Income Tax Considerations in Applying the Discounted Future Returns Method of Valuing a Business." Presented at the Annual Meetings of the Western Economic Association International, Seattle, Washington, July 1-3, 2002.

Lewis, W. Cris, Frank Caliendo, and Tyler J. Bowles. "The Personal Consumption Offset: Adjusting for Consumption in Retirement." Paper presented at the Annual Meetings of the Western Economic Association International, Seattle, Washington, July 1-3, 2002.

Bowles, Tyler J., and W. Cris Lewis. "An Econometric Approach to Appraising Goodwill." Presented at the annual meetings of the American Academy of Economic and Financial Experts, April 4, 2002.

Bowles, Tyler J., and Ryan Bosworth. "Farm Household Wealth: Measurement, Structure, and Determinants." Paper presented at the Western Agricultural Economics Association Annual Meetings, Logan, Utah, July 11, 2001.

Bowles, Tyler J., and W. Cris Lewis. "Unit Roots and the Capitalization of Earnings Approach to Business Valuation." Presented at the Western Economic Association International Meetings, San Francisco, California, July 4-8, 2001.

Bowles, Tyler J., and Ryan Bosworth. "Scale Economies in Public Education: Evidence from School Level Data." Paper presented at the 40th Annual Meeting of the Western Regional Science Association, Palm Springs, California, February 27, 2001.

Bowles, Tyler J., and W. Cris Lewis. "Tax Considerations in Valuing Non-Taxable Entities." Paper presented at the Annual Meetings of the Allied Social Science Association, New Orleans, Louisiana, January 6, 2001.

Bowles, Tyler J., and W. Cris Lewis. "Unsettled Issues in Measuring Lost Profits." Paper presented at the 75th Annual Conference of the Western Economic Association, Vancouver, B.C., Canada, July 1, 2000.

Lewis, W. Cris, and Tyler J. Bowles. "The Individual Income Tax in Eight Western States: Variation Across States and Over Time." Paper presented at the 39th Annual Meeting of the Western Regional Science Association, Poipu, Hawaii, February 27, 2000.

Bowles, Tyler J. "Retirement Planning Tax Issues." Presented at the Utah State University Extension Income Tax School, St. George, Utah, December 1999.

Lewis, W. Cris, and Tyler J. Bowles. "A Statistical Analysis of Federal Tax Rate Stability Over Time and Implications for Valuing Lifetime Net Earnings." Invited paper presented at the Annual Meetings of the Western Economic Association, San Diego, California, July 9, 1999.

Bowles, Tyler J. "Agricultural Tax Issues." Presented at the Utah State University Extension Income Tax School, St. George, Utah, December 1998.

Bowles, Tyler J. "Valuing Minority Interests in Family Limited Partnerships and Family Limited Liability Companies." Invited paper presented at the *Annual Meetings of the American Academy of Economic and Financial Experts*, Las Vegas, Nevada, March 25-28, 1998.

Lewis, W. Cris, and Tyler J. Bowles "The Effects of Capital Market Imperfections and Intertemporal Choice on Appraising Retirement Contributions." Invited paper presented at the *Annual Meetings of the American Academy of Economic and Financial Experts*, Las Vegas, Nevada, April 2-April 4, 1997.

Bowles, Tyler J. "Lost Profits Appraisals: A Note on the Credibility of Underlying Financial Information." Invited paper presented at the *Annual Meetings of the American Academy of Economic and Financial Experts*, Las Vegas, Nevada, March 27-30, 1996.

Bowles, Tyler J. "Estimating Lost Retirement Benefits: Tax Considerations." Invited paper presented at the *Annual Meetings of the American Academy of Economic and Financial Experts*, Las Vegas, Nevada, March 29-April 1, 1995.

#### **Professional Service**

Past Board Member and Western Vice President of the National Association of Forensic Economics  
Director, Utah State University Income Tax School.

Reviewer for *Journal of Legal Economics*.

Reviewer for *Journal of Forensic Economics*.

School Board Member, 2001 through 2014

# Academic Transcript

A00014919 Tyler J. Bowles  
Sep 23, 2015 10:51 am

 This is not an official transcript. Courses which are in progress may also be included on this transcript.

USU converted to semesters beginning Fall 1998. Transfer credit has been converted to semester credits. The USU articulation is displayed rather than the actual transfer course.

## Institution Credit Transcript Totals

### **Transcript Data**

#### **STUDENT INFORMATION**

**Name :** Tyler J Bowles

**Birth Date:** 12-SEP

#### **Curriculum Information**

##### **Current Program**

Non-Degree Program/Masters

**Major and Department:** Regional Campuses  
Distance Ed, Regional  
Campuses Distance Ed

\*\*\*Transcript type:ADVS is NOT Official \*\*\*

#### **DEGREES AWARDED**

**Awarded:** Certificate/Graduate **Degree Date:** Aug 14, 2015

#### **Curriculum Information**

##### **Primary Degree**

**Major:** Rehabilitation Counseling

|  | <b>Attempt</b> | <b>Passed</b> | <b>Earned</b> | <b>GPA</b> | <b>Quality</b> | <b>GPA</b> |
|--|----------------|---------------|---------------|------------|----------------|------------|
|  | Hours          | Hours         | Hours         | Hours      | Points         |            |

**Institution:** 31.000 22.000 22.000 17.000 65.03 3.82

**Awarded:** Master of Science **Degree Date:** Aug 22, 1986

#### **Curriculum Information**

##### **Primary Degree**

**Major:** Economics

|  | <b>Attempt</b> | <b>Passed</b> | <b>Earned</b> | <b>GPA</b> | <b>Quality</b> | <b>GPA</b> |
|--|----------------|---------------|---------------|------------|----------------|------------|
|  | Hours          | Hours         | Hours         | Hours      | Points         |            |

**Institution:** 39.334 39.334 39.334 32.001 125.33 3.91

#### **INSTITUTION CREDIT**

**-Top-**

##### **Term: Winter 1985**

**College:** University

**Major:** Non Degree prior to Fall 1996

**Academic Standing:** Good Standing

Tyler J. Bowles, Ph.D., CPA (Rule 26 Testimony Disclosure -- Testimony record for past four years)

| Case   | Trial (T),<br>Deposition (D),<br>Trial-<br>Deposition (TD),<br>Hearing (H),<br>Arbitration (A) | Location of<br>Trial or<br>Deposition | Date of<br>Testimony | Retaining<br>Attorney | Jurisdiction                                       |
|--|--|---------------------------------------|----------------------|-----------------------|--|
| Griffeth v. U.S.                                   | T  | Salt Lake City, UT                    | 1/6/2015             | Blake Atkin           | U.S. District Court, District of Utah, N. Division |
| Whitehead v. Wyoming Casing Services               | D  | Logan, Utah                           | 2/11/2015            | Robert Tiedeken       | U.S. District Court, District of Wyoming           |
| Travis Roberts, MD v. Community Health Care Center | TD   | Salt Lake City, UT                    | 4/17/2015            | Scott Olheiser        | Wyoming 7th Judicial District Court                |
| Spratt-Manning v. Ada County Paramedics            | D  | Boise, Idaho                          | 5/11/2015            | Jason Monteleone      | Idaho 4th Judicial District Court                  |
| Cooney v. Subaru of Missoula                       | H  | Missoula, MT                          | 6/10/2015            | Ryan Shaffer          | Montana Human Rights Bureau                        |
| Messling v. Wyoming Rents                          | D  | SLC, UT                               | 6/11/2015            | Michael Shickich      | Wyoming 7th Judicial District Court                |
| Rossin v. Hymes                                    | D  | Logan, Utah                           | 8/12/2015            | John Henley           | Wyoming 7th Judicial District Court                |
| Arentz v. Mills Concrete, LLC                      | D  | Logan, Utah                           | 8/13/2015            | Robert Stepanis       | Wyoming 9th Judicial District Court                |
| Johnson v. Peterson                                | T  | American Fork, UT                     | 1/7/2016             | Matt Feller           | Utah 4th Judicial District Court                   |
| Sanchez v. Spencer et al.                          | D  | SLC, UT                               | 3/31/2016            | Christopher Graham    | Idaho 4th Judicial District Court                  |
| Ball v. Bowers                                     | T  | SLC, UT                               | 5/9/2016             | Blake Atkin           | Utah 3rd Judicial District Court                   |
| Emery et al. v. Meridian                           | D  | Billings, MT                          | 5/10/2016            | Jim Ragain            | American Arbitration Assoc.                        |
| Garcia v. CRMC et al.                              | D  | Logan, Utah                           | 5/24/2016            | Sean Scoggins         | Wyoming 1st Judicial District Court                |
| Marland v. Asplundh                                | D  | Logan, Utah                           | 5/31/2016            | Katherine Vento       | U.S. District Court, District of Utah              |
| Hales v. Andrus et al.                             | D  | SLC, UT                               | 6/10/2016            | Michael Skolnick      | Utah 4th Judicial District Court                   |
| Emery et al. v. Meridian                           | A  | Minneapolis, MN                       | 6/17/2016            | David Clark           | American Arbitration Assoc.                        |
| Asherman v. Lannett                                | D  | SLC, UT                               | 7/26/2016            | Bryan Ulmer           | Wyoming 5th Judicial District Court                |
| Anderson v. Zimmerman                              | T  | Worland, WY                           | 8/5/2016             | Christopher King      | Wyoming 5th Judicial District Court                |
| Ponce v. Mulberry Transport                        | D  | Logan, UT                             | 8/23/2016            | Allen Browning        | Idaho 7th Judicial District Court                  |
| Stalder v. J.M. Huber                              | D  | Logan, UT                             | 8/25/2016            | Clay Jenkins          | Wyoming 6th Judicial District Court                |
| Kaptein v. BMC West                                | D  | Logan, UT                             | 9/15/2016            | Joel Beck             | U.S. District Court, District of Idaho             |
| Hebert v. Sinclair Oil                             | D  | Logan, UT                             | 9/19/2016            | Fred Harrison         | U.S. District Court, District of Wyoming           |
| Starnes v. CarMax                                  | A  | Salt Lake City, UT                    | 10/5/2016            | Nathan Starnes        | Arbitration  |
| Crum v. Theorine                                   | D  | Logan, UT                             | 10/7/2016            | Clay Fulcher          | U.S. District Court, District of Wyoming           |
| Asherman v. Lannett                                | T  | Cody, WY                              | 10/18/2016           | Bryan Ulmer           | Wyoming 5th Judicial District Court                |
| Hebert v. Sinclair Oil                             | T  | Cheyenne, WY                          | 1/31/2017            | Fred Harrison         | U.S. District Court, District of Wyoming           |
| Crum v. Theorine                                   | T  | Cheyenne, WY                          | 2/1/2017             | Clay Fulcher          | U.S. District Court, District of Wyoming           |
| Turner v. Green                                    | D  | Logan, UT                             | 3/24/2017            | Allen Browning        | Idaho 7th Judicial District Court                  |
| Marchant v. Keetch                                 | D  | Logan, UT                             | 4/19/2017            | Shaun Peck            | Utah 1st Judicial District Court                   |
| Gray v. Petco                                      | D  | Logan, UT                             | 5/10/2017            | Scott Olheiser        | U.S. District Court, District of Wyoming           |
| Schou v. Welker                                    | T  | Jackson, WY                           | 5/17/2017            | John Bowers           | Wyoming 9th Judicial District Court                |
| Cunningham v. Harmon Transport                     | T  | Cheyenne, WY                          | 6/9/2017             | Scott Stinson         | U.S. District Court, District of Wyoming           |
| Hernandez v. Barlow                                | D  | SLC, UT                               | 6/22/2017            | James Egan            | Utah 3rd Judicial District Court                   |
| Donaldson v. Memorial Hospital of Sweetwater Cnty  | D  | Logan, UT                             | 9/22/2017            | Richard Honaker       | Wyoming 3rd Judicial District Court                |
| Johnson v. Johnson                                 | T  | Logan, UT                             | 10/26/2017           | Brad Bearson          | Utah 1st Judicial District Court                   |
| Hansen v. Skywest Airlines                         | T  | Cheyenne, WY                          | 10/30/2017           | Jeffrey Gosman        | U.S. District Court, District of Wyoming           |
| McGuirk v. Wetzel                                  | D  | Logan, UT                             | 11/6/2017            | Scott Olheiser        | Wyoming 7th Judicial District Court                |
| Carvill v. RDS Investments                         | D  | Logan, UT                             | 11/8/2017            | Charles Barnum        | U.S. District Court, District of Wyoming           |
| Steadman v. McManus                                | D  | Logan, UT                             | 12/22/2017           | Bret Hanna            | Utah 4th Judicial District Court                   |
| Beaslin v. Brooks                                  | D  | Logan, UT                             | 1/24/2018            | James Hasenyager      | Utah 3rd Judicial District Court                   |
| Ben v. Robinson Waste Services                     | D  | Logan, UT                             | 4/20/2018            | Stephen Kelson        | Utah 2nd Judicial District Court                   |
| Locke v. File et al.                               | TD   | SLC, UT                               | 5/29/2018            | Allen Browning        | U.S. District Court, Southern Dist. of Mississippi |
| Hyland v. Dixie State Univ. et al.                 | D  | SLC, UT                               | 6/15/2018            | Darin Goff            | U.S. District Court, Dist. of Utah, Central        |
| Northern Bottling v. Pepsico                       | D  | SLC, UT                               | 7/26/2018            | James Ragain          | U.S. District Court, Dist. of North Dakota         |
| Walling v. Staker Parsons                          | D  | Twin Falls, ID                        | 8/9/2018             | Kurt Holzer           | Idaho 4th Judicial District Court                  |
| Bowman v. Painter                                  | T  | Idaho Falls, ID                       | 9/12/2018            | Allen Browning        | Idaho 7th Judicial District Court                  |
| Beck v. E&R Transportation                         | D  | Pocatello, Idaho                      | 10/9/2018            | Joel Beck             | Idaho 6th Judicial District Court                  |
| Mortensen v. Nationwide                            | A  | SLC, UT                               | 10/30/2018           | Bruce Burt            | UIM Arbitration                                    |
| Westover V. Cundick                                | D  | Logan, UT                             | 11/5/2018            | Blake Atkin           | Idaho 6th Judicial District Court                  |
| Branson v. Rocky Mtn Rod                           | T  | Casper, WY                            | 11/6/2018            | John Whitaker         | Wyoming 7th Judicial District Court                |
| Jeffs v. Lewis                                     | D  | Pocatello, Idaho                      | 11/9/2018            | Joel Beck             | Idaho 7th Judicial District Court                  |
| Kearney v. EIRMC                                   | D  | Idaho Falls, ID                       | 12/11/2018           | Mike Wheiler          | Idaho 7th Judicial District Court                  |
| Burnside v. Peterson                               | T  | Rigby, ID                             | 1/9/2019             | Jason Wood            | Idaho 7th Judicial District Court                  |
| Beaslin v. Brooks                                  | T  | SLC, UT                               | 1/15/2019            | James Hasenyager      | Utah 3rd Judicial District Court                   |
| Hernandez v. Zollinger                             | D  | Pocatello, Idaho                      | 1/31/2019            | Kevin Donohoe         | Idaho 5th Judicial District Court                  |
| Towell v. Lee                                      | T  | Idaho City, ID                        | 2/8/2019             | Gabe Haws             | Idaho 4th Judicial District Court                  |
| Yu v. Idaho State University                       | T  | Pocatello, Idaho                      | 2/28/2019            | Ronald Coulter        | U.S. District Court, District of Idaho             |
| Secol v. Fall River                                | T  | Rexburg, Idaho                        | 3/21/2019            | Sam Angell            | Idaho 7th Judicial District Court                  |
| Layton v. Eagle rock Timber                        | T  | Pocatello, Idaho                      | 4/17/2019            | Jacob Wessel          | U.S. District Court, District of Idaho             |
| Kane v. Aubrey                                     | T  | Seattle, WA                           | 6/10/2019            | Frank Chapman         | Superior Court of Washington                       |

**Tyler J. Bowles, Ph.D., CPA**  
**Tyler J. Bowles & Associates, LLC**  
**Consultants in Economics and Finance**  
**4856 West 100 South**  
**Weston, Idaho 83286**  
**(435) 512-0707**

**FEE SCHEDULE**  
Effective July 1, 2018

Plaintiff's economic loss report in injury, death, and termination cases:<sup>1</sup>

Preparation of report: Generally \$2,250 - \$3,750 depending on volume of material to review.

Preparation of updated reports and preparation for depositions and trials: \$250 per hour.

Commercial cases and defense work:

Tyler J. Bowles: \$250/hour  
Staff: \$100/hour

Deposition testimony (payment in advance):

|                               |  |
|-------------------------------|--|
| \$250/hour (two hour minimum) | Travel costs and time for depositions: |
|                               | Logan, Utah \$0                        |
|                               | SLC or Idaho Falls \$750               |
|                               | Pocatello, ID \$600                    |
|                               | Rock Springs, Twin Falls \$1,200       |

Trial testimony:

|                                    |   |
|------------------------------------|---|
| Wyoming, Utah, and Idaho locations | \$750/per half day plus out-of-pocket costs |
| Other locations                    | To be arranged                              |

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<sup>1</sup>Time reviewing invoices and creating a table of past medical expenses is billed at a separate rate of \$50.00 per hour.